**The Changing Arctic Inquiry - The Environmental Audit Committee**

Written Evidence submitted by Professor Elizabeth Kirk, Nottingham Trent University

# **Executive Summary**

* 1. This response focuses on question 2 posted by the terms of reference and in particular on possible legal responses to plastic and micro-plastic in the arctic.
  2. A reduction of plastic consumption is required and may not have the negative economic impact many highlight. Evidence from the ban on CFCs and the rise of plant based plastic industries show a way forward.
  3. The response proposes the adoption of UK based legislation and that the UK promotes the adoption of an international treaty on plastics. The UK is already committed to take action to tackle plastics under a number of treaties, but the actions required are insufficient to effectively tackle plastics pollution.
  4. The UK should be leading a coalition of committed countries to create an international treating to tackle plastic waste.
  5. A Plastic Fund should be launched to tackle legacy plastic which is often located in international waters. Further research is required to tackle the growing legacy plastic issue in our oceans.
  6. Expertise in researching international environmental law, particularly the law on marine pollution leads the author to make a set of clear recommendations at the end of this submission which I hope the Committee will take forward.

# **About the Author**

* 1. [Professor Elizabeth Kirk](https://www.ntu.ac.uk/staff-profiles/law/elizabeth-kirk) has over 20 years’ experience of researching the laws relating to marine pollution from land-based activities and international environmental laws more generally. Her research has been funded by the AHRC, ESRC, EU, British Academy and Royal Society for Edinburgh, amongst others. She has published numerous papers in this area and produced 2 edited collections with colleagues. Her research has informed the work of intergovernmental organisations and national bodies such as the Scottish Environment Protection Agency. Professor Kirk is co-Director of the Centre for Marine Ecological Resilience and Geological Resources (MERGeR) in Nottingham Law School, Nottingham Trent University, chair of the IUCN Academy of Environmental Law, a member of the Steering Group of the World Commission of Environmental Law and a member of the Board of Management of the European Environmental Law Forum.

# **Submission**

* 1. What is the extent of plastic and microplastic pollution in the Arctic? Where does this come from? What could the UK Government do to reduce it?
  2. Plastics and microplastics are carried on ocean currents to the Arctic. Significant legislative attention is required to radically reduce pollution by plastics. Current measures to encourage lower use of plastics (e.g.by taxing single use plastic bags) and greater recycling are proving inadequate to the challenge. While some companies have voluntarily pledged to reduce plastics packaging, legislative action is also required by the government.
  3. The UK government could adopt plastics legislation. Such legislation ought to focus on phasing out the production of oil-based plastics, on extended producer liability and on dealing with legacy plastics.
  4. It may be assumed that phasing out the production of oil-based plastics would be detrimental to the UK economy, however, in 1985 the world adopted the Ozone Convention[[1]](#footnote-1) and committed to phasing out CFCs and other chemicals that attack the ozone layer. The adoption of the convention led industry to produce alternative less harmful (to the ozone layer) chemicals. Plant based plastics are already being developed[[2]](#footnote-2) and used[[3]](#footnote-3) and a ban on oil-based plastics could help launch this industry. It will not, however, be possible to stop the use of all plastics immediately and may not be desirable to do so in the long term. Some oil based plastics may, for example, continue to be required in medical treatments and procedures. For this reason extended producer liability needs to be considered.
  5. While extended producer liability is something that the OSPAR Commission for the North East Atlantic is currently pursuing[[4]](#footnote-4) (the UK is party to the OSPAR Commission) the UK should not wait for action at the international level. Our oceans are being polluted by plastics, from nurdles used in the production of other plastic items to micro plastics produced as products break down, with all manner of plastics found between these stages accumulating in the oceans. We have had reports of micro-plastic pollution in UK rivers being recorded at higher levels than anywhere else in the world.[[5]](#footnote-5) Extended producer liability would improve the management of plastics through their lifecycle. In effect, it creates a financial incentive for producers to create products that use less plastic, are constructed in ways that make the recycling of their constituent parts easier and that use recycled plastics. It thus should lead to the reduction in production of plastics, a reduction in loss of plastics during the production process, and an increase in recycling of plastics.
  6. In addition to action at the domestic level, the government could lead the development of an international treaty to address oil-based plastics. Such a treaty is timely – plastics accumulation in the oceans is increasing exponentially “from around 5 million tonnes in the 1950s to over 300 million tonnes today”.[[6]](#footnote-6)  Any such treaty should address plastics generally, as it is impossible to distinguish those plastics that end up in the oceans from others.
  7. There is evidence to suggest that a treaty would gain support. A number of States have adopted legislation to ban or reduce the use of particular plastics. These include Kenya’s ban on the manufacture, use, import and export of plastic bags, adopted under section 3 and 86 of the Environmental Management and Co-ordination Act.[[7]](#footnote-7) Some multi-national companies have pledged to reduce, or recycle their plastics.[[8]](#footnote-8) In addition, measures are being adopted under a range of treaties from the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,[[9]](#footnote-9) to the Convention on Biological Diversity,[[10]](#footnote-10) to regional seas agreements such as the OSPAR Regional Action Plan (RAP) for Marine Litter.[[11]](#footnote-11)
  8. A plastics treaty should address capacity building to increase recycling and better management plastic throughout its lifecycle, the development of scientific understanding of the impacts of plastics and technologies to mitigate those impacts and public education. It should be designed to phase out oil based plastics, to support alternative technologies and to address legacy plastics. The key aspects are explained in the following paragraphs.
  9. It is common for treaties to adopt a “phase out” approach to harmful substances. Such approaches are seen in, for example, the Ozone Convention and the POPs Convention.[[12]](#footnote-12) For example, the Montreal Protocol to the Ozone Convention phased out Halons more quickly than CFCs. The POPs Convention began with 12 chemicals before adopting a ban on a further set of chemicals in 2009 and further bans in each of its subsequent meetings.
  10. The UK government could support a similar approach in a plastics treaty, though in this case the focus would be on use as much as form of plastic. Given the existing legislative focus on single use plastic bags around the world, they may be proposed as subject to an immediate ban. The use of plastics in other products such as medical products may be phased out over longer time frames, to allow development of viable substitute materials.
  11. The government could also propose provisions designed to support alternative technologies such as plant based plastics. In the short term measures would have to be designed to facilitate research into and commercialisation of alternatives to oil based plastics and into the impacts on the environment and on industries (such as recycling) of moving to these alternative materials.
  12. Any treaty should also contain provisions to address plastics already in the ocean “legacy plastics”. These may again fall under the head of capacity building, but given that many of these legacy plastics are found in the high seas, provision is also needed for common action. In this respect provision could be made for a “Plastics Fund” drawing on the model provided by the Fund Convention.[[13]](#footnote-13) While the fund convention provides for contributions from importers and exporters of oil, a “Plastics Fund” could be contributed to by plastics producers, importers and exporters. The resulting fund could be used to support the costs of capturing, removing and recycling plastics found in the ocean.

# **Recommendations**

* 1. The recommendations made in this submission are:
  2. That the government adopt legislation to reduce plastics production, and improve the management of plastics during their lifecycle.
  3. That the government promotes a treaty to phase out plastics production, improve the management of plastics during their lifecycle and support the development of a mechanism and financial support to facilitate the removal of legacy plastics from the oceans, including the Arctic ocean.
  4. That the government promotes the establishment of a Plastic Fund to tackle the legacy plastic issue in the world's oceans

Professor Elizabeth Kirk is happy to present oral evidence to the committee or individual committee members.

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1. Vienna Convention for the Protection of the Ozone Layer (adopted 22 March 1985; entered into force 22 September 1988) 1513 UNTS 293 [↑](#footnote-ref-1)
2. Song JH, Murphy RJ, Narayan R, Davies GBH. ‘Biodegradable and compostable alternatives to conventional plastics’ (2009) 364 (1526) *Philosophical Transactions of the Royal Society B: Biological Sciences* 2127-2139. [↑](#footnote-ref-2)
3. # Des King “M&S, Plan A and a Polymer for all Reasons? Profile – Kevin Vyse” Packaging News January 2018 https://www.packagingnews.co.uk/features/ms-plan-polymer-reasons-profile-kevin-vyse-05-01-2018 ; Sylvia Thomson ‘Are Biologically Based Plastics a Realistic Replacement For Petrochemical Plastics?’ The Irish Times 29 January 2018 https://www.irishtimes.com/news/science/are-biologically-based-plastics-a-realistic-replacement-for-petrochemical-plastics-1.3372186

   [↑](#footnote-ref-3)
4. Regional Action Plan (RAP) for Marine Litter (OSPAR Marine Litter RPA), available at: <https://www.ospar.org/work-areas/eiha/marine-litter/regional-action-plan> accessed 10 May 2018 [↑](#footnote-ref-4)
5. Dalton, J. “Manchester River Has Worst Level of Microplastic Pollution Ever Recorded, Says Study” The Independent 12 March 2018 https://www.independent.co.uk/environment/greater-manchester-river-tame-microplastic-pollution-worst-ever-university-study-a8248576.html [↑](#footnote-ref-5)
6. RC Thomson “Future of the Sea: Plastic Pollution” (Foresight, Government Office for Science, 2017) p.5. [↑](#footnote-ref-6)
7. The Kenya Gazette Vol.CXIX-No.31 Page. 1077 14 March, 2017 [↑](#footnote-ref-7)
8. Coca-Cola pledges to recycle all packaging by 2030 BBC News 19 January 2018 <<http://www.bbc.co.uk/news/business-42746911>> last accessed 12 May 2018; Sandra Laville and Rebecca Smithers “UK supermarkets launch voluntary pledge to cut plastic packaging” The Guardian 26 April 2018 <https://www.theguardian.com/environment/2018/apr/26/uk-supermarkets-launch-voluntary-pledge-to-cut-plastic-packaging> last accessed 12 May 2018. [↑](#footnote-ref-8)
9. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (adopted 22 March 1989; entered into force 5 May 1992) 1673 UNTS 57. [↑](#footnote-ref-9)
10. Convention on Biological Diversity (adopted 5 June 1992; entered into force 29 December 1993) 1760 UNTS 79. [↑](#footnote-ref-10)
11. Available at: <https://www.ospar.org/work-areas/eiha/marine-litter/regional-action-plan> [↑](#footnote-ref-11)
12. Stockholm Convention on Persistent Organic Pollutants (adopted 22 May 2001; entered into force 17 May 2004) 2256 UNTS 119 [↑](#footnote-ref-12)
13. 1992 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Fund Convention) UK Treaty Series No. 87 (1996) Cm 3433 Cm3432 [↑](#footnote-ref-13)